

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 88-052

NPDES NO. CA 0029335

WASTE DISCHARGE REQUIREMENTS FOR:

DESOTO, INCORPORATED
CHEMICAL COATINGS DIVISION
BERKELEY
ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. Desoto, Inc., Chemical Coatings Division, hereinafter called the discharger, by application dated December 30, 1987, has applied for issuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).
2. The discharger owns and operates a resin and paint manufacturing facility at 1608 Fourth Street in the City of Berkeley, Alameda County. A wide variety of products are made at the facility including latex emulsions, latex paints, and aerospace and industrial coatings. See Attachment A.
3. The discharger has been involved with groundwater investigations at this facility since 1982 due to an underground tank leak. During an underground leaking tank investigation, the discharger discovered both a free solvent and dissolved solvent plume in the groundwater beneath their facility. As of February 1988, the discharger has not defined the full lateral and vertical extent of groundwater pollution at the facility.
4. As of February 1988, studies indicated that the groundwater pollution extended vertically to at least a depth of 10 feet. These studies detected various industrial solvents, including benzene, xylene, ethyl benzene and toluene, in groundwater beneath the facility. The discharger seeks to cleanup and prevent the further migration of groundwater pollutants by groundwater extraction and treatment.
5. The discharger proposes to use a groundwater extraction trench on-site that intercepts and collects polluted groundwater, then treat the water using an air stripper system prior to polishing with a carbon adsorption unit.
6. Waste 002, as defined in the NPDES application, will consist of up to 28,800 gallons per day (gpd) of groundwater which will be treated as stated in Finding 5 prior to discharge to a City of Berkeley storm drain, a tributary to Central San Francisco Bay.

7. The groundwater beneath the facility has been determined to flow from east to west towards the Bay.
8. The discharger in the Spring of 1986 constructed the groundwater extraction trench stated in Finding 5. Between August 1986 and January 13, 1987 the discharger pumped extracted polluted groundwater through hoses directly from the groundwater extraction trench to a City of Berkeley storm drain, a tributary to the Bay, without an appropriate NPDES permit. This discharge has been referred to the Alameda County District Attorney's office for possible enforcement action.
9. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives for Central San Francisco Bay, and contiguous surface and ground water.
10. The beneficial uses of Central San Francisco Bay include:
 - a. Contact and non-contact water recreation
 - b. Wildlife habitat
 - c. Preservation of rare and endangered species
 - d. Estuarine habitat
 - e. Fish spawning and migration
 - f. Industrial process and service supply
 - g. Shellfishing
 - h. Navigation
 - i. Ocean commercial and sport fishing
11. The Basin Plan prohibits discharge of wastewater which has particular characteristics of concern to beneficial uses at any point where the wastewater does not receive a minimum dilution of at least 10:1 or into any nontidal water, deadend slough, similar confined water, or any immediate tributary thereof.
12. The Basin Plan allows for exceptions to the prohibitions referred to in Finding 11 above when it can be demonstrated that a net environmental benefit can be derived as a result of the discharge.
13. Exceptions to the prohibitions referred to in Finding 11 are warranted because the discharge is an integral part of a program to clean up polluted groundwater and thereby produce an environmental benefit, and because receiving water concentrations are expected to be below levels that would effect beneficial uses. Should studies indicate chronic effects, not currently anticipated, the Board will review the requirements of this Order based upon Receiving Water Limitation C.1.e.
14. The Basin Plan prohibits discharge of "all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin." The discharger's groundwater extraction and treatment system and associated operation, maintenance, and monitoring plan constitutes an acceptable control program for minimizing the discharge of toxicants

to waters of the State.

15. Effluent limitations of this Order are based on the Basin Plan, State plans and policies, U.S. Environmental Protection Agency guidance, and best engineering judgement as to best available technology economically achievable.
16. Effluent limitations and toxic effluent standards established pursuant to Sections 301, 304 and 307 of the Clean Water Act, and amendments thereto are applicable to the discharge.
17. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
18. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
19. The Board, in a public hearing, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Desoto, Inc., Chemical Coatings Division, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. The discharge of waste or hazardous materials in a manner which will degrade the water quality or adversely affect beneficial uses of the groundwaters of the State is prohibited.
2. The discharge shall be limited to treated groundwater.

B. Effluent Limitations

1. The effluent at the point of discharge into the storm drain shall not contain constituents in excess of 1% of the influent concentrations, or in excess of the following limits, whichever is less:

Constituent	Units	Instantaneous Maximum
Benzene	ug/l	5
C ₃ benzene isomers	ug/l	5
C ₄ benzene isomers	ug/l	5
Ethyl benzene	ug/l	5
Total Xylenes	ug/l	5
Toluene	ug/l	5
Chloroform	ug/l	5

1,1 Dichloroethane	ug/l	5
1,1 Dichloroethene	ug/l	5
1,2 Dichloroethene	ug/l	5
Methylene Chloride	ug/l	5
1,1,1 Trichloroethane	ug/l	5
Total Petroleum Hydrocarbons	ug/l	50
Tetrahydrofuran	ug/l	50
Vinyl Butanoate	ug/l	50
Acetone	ug/l	50
Methyl Ethyl Acetone	ug/l	50
Methyl Amyl Ketone	ug/l	50
Methyl Butyl Ketone	ug/l	50
Methyl Ethyl Ketone	ug/l	50
2 - Pentanone	ug/l	50
Methyl Pentanone	ug/l	50
Isopropanol	ug/l	50
Methyl Pentanol	ug/l	50
2 - Butanol	ug/l	50
Alcohols	ug/l	50

2. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.
3. TOXICITY: The survival of test fishes in 96-hour static renewal bioassays of the discharge of Waste 002 shall be a median of 90 percent survival and a 90 percentile value of not less than 70% survival.

Compliance of the bioassays shall be performed using two test fish species in parallel tests. One shall be three-spined stickleback, and the other shall be either rainbow trout or fathead minnow.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption wither at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be expected to be exceeded in waters of the State in any place within one foot of the water surface:

a. Dissolved oxygen: 5.0 mg/l minimum. The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause lesser concentration(s) than specified above, the discharge shall not cause further reduction in the concentration of dissolved oxygen.

b. pH The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.

c. Un-ionized ammonia 0.025 mg/l as N Annual Median
0.16 mg/l as N Maximum at any time

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

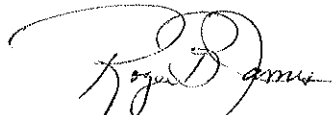
D. Provisions

1. The discharger shall comply with all sections of this Order immediately upon adoption.
2. The discharger shall comply with the attached Self-Monitoring program as adopted by the Board and as may be amended by the Board.
3. The discharger shall also notify the Regional Board if any activity has occurred or will occur which would result in the discharge, on a frequent or routine basis, of any toxic pollutant which is not limited by this Order.
4. This permit may be modified prior to the expiration date to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order.
5. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986.
6. This Order expires April 19, 1993. The discharger must file a

report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

7. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Roger B. James, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an order adopted by the California Water Quality Control Board, San Francisco Bay Region on April 20, 1988.



ROGER B. JAMES
EXECUTIVE OFFICER

Attachments:

Standard Provisions & Reporting Requirements, dated December 1986
Self-Monitoring Program
Site map

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

Desoto, Incorporated

Chemical Coatings Division

Berkeley, Alameda County

NPDES NO. CA 0029335

ORDER NO. 88-052

CONSISTS OF

PART A

(dated December 1986
Mod. SBTD 1/23/87)

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

<u>Stations</u>	<u>Description</u>
I-1	At a point in the groundwater extraction/treatment system at the cock valve immediately prior to the air strippers.

B. EFFLUENT

<u>Stations</u>	<u>Description</u>
E-1	At a point in the groundwater extraction/treatment system at the cock valve immediately after the carbon unit.

C. RECEIVING WATERS

<u>Stations</u>	<u>Description</u>
C-1	At a point in San Francisco Bay at least 100 feet but no more than 200 feet downstream from the storm sewer discharge point.

II. SCHEDULE OF SAMPLING AND ANALYSIS

- A. The schedule of sampling and analysis shall be that given in Table I.

III. Miscellaneous reporting

If any chemical additives are proposed to be used in the operation of the treatment system it shall be reported 30 days prior to their use.

IV. MODIFICATION TO PART A

A. Deletions:

Sections D.2.e, D.2.g, D.3.b, E.1.e, E.1.f, E.3, and E.4.

B. Modifications:


G.4 Written reports under G.4 shall be filed each calendar quarter, once in January, April, July and October.

G.4.b The report shall be prepared in a format acceptable to the Executive Officer. The example in Appendix A is provided as guidance.

- G.4.e The report will be prepared in a format acceptable to the Executive Officer. NPDES Discharge Monitoring Report, EPA Form 3320-1, is provided as guidance.
- G.4.e.1 Influent and Effluent Data Summary Reports shall be submitted only to the Regional Board Executive Officer, not to the EPA.
- G.5 By January 30 of each year, the discharger shall submit, in place of the quarterly report, an annual report to the Regional Board covering the previous year.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No.73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 88-052.
2. Was adopted by the Board on April 20, 1988.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer or Regional Board.


ROGER B. JAMES
EXECUTIVE OFFICER

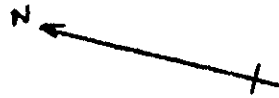
Attachment: Table I

TABLE 1												
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS												
Sampling Station	I-1	E-1	C-1									
TYPE OF SAMPLE	G	G	G									
Flow Rate (gal/day)		D										
pH (units)		M	Q									
Dissolved Oxygen (mg/l and % saturation)		M	Q									
Temperature (°C)		M										
Fish Toxicity 96-hour % Survival in undiluted		2/Y										
Un-ionized Ammonia (as N) mg/l		Q										
Volatile Chlorinated Hydrocarbons (ug/l) (1)	M	M*	Q									
Aromatics (ug/l) (2)	M	M*	Q									
Alcohols and Ketones (ug/l) (3)	M	M*	Q									
Priority Pollutant Scan including metals (4)		A										
EPA 624		Q										

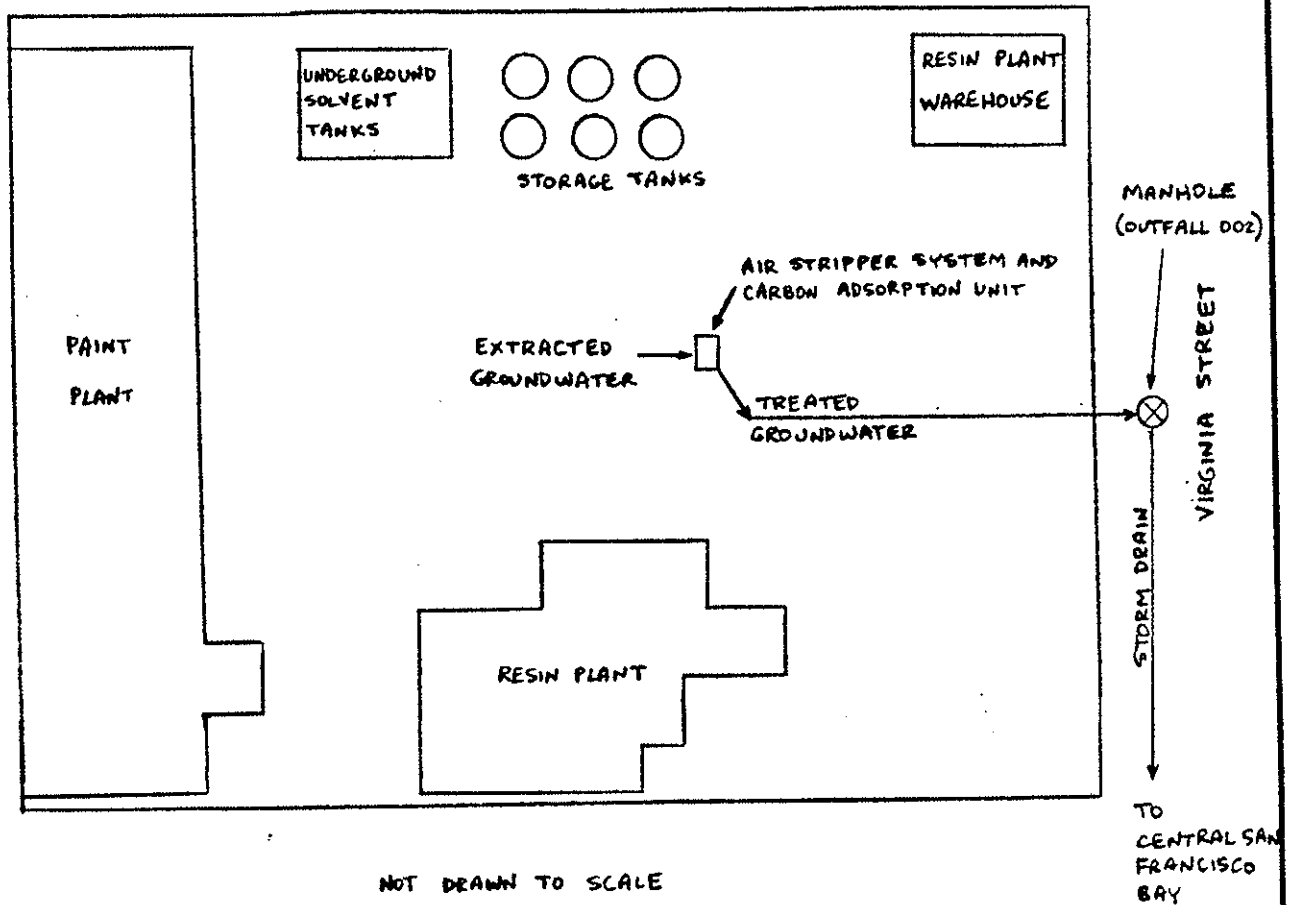
LEGEND FOR TABLE 1

G = grab sample
 D = once each day
 M = once each month
 Q = quarterly, once in February, May, August and November
 M* = weekly for the first 4 months of operation; reduced to once a month thereafter
 A = one time only within the first 3 months of operation

- (1) Defined as chloroform, 1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene, methylene chloride, 1,1,1-trichloroethane
- (2) Defined as benzene, toluene, xylenes, and ethyl benzene (all isomers) and total petroleum hydrocarbons.
- (3) Defined as acetone, methyl ethyl acetone, methyl amyl ketone, methyl butyl ketone, methyl ethyl ketone, 2-pentanone, methyl pentanone, isopropanol, methyl pentanol, 2-butanol, alcohols, tetrahydrofuran and vinyl butanoate.
- (4) The priority pollutant scan shall be performed to satisfy Items V and VI of NPDES application Form 2C (followup data).



FOURTH STREET



NOT DRAWN TO SCALE

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

Attachment A

Desoto, Inc.
Berkeley, Alameda County

DRAWN BY: MTC DATE: 3-2-88 DRWG. NO.